

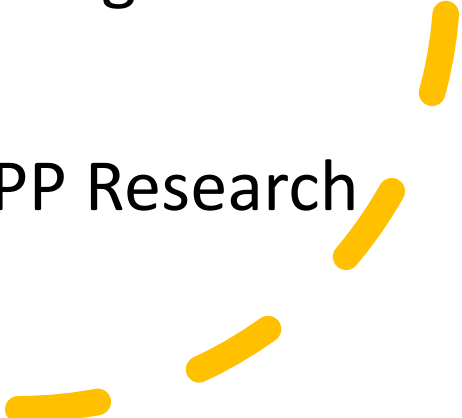


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# Today's Objectives

- Review the clinical need for and evidence-based treatment for pre-diabetes.
  - Identify the groups involved in the original research
  - Identify The rational for the Diabetes Prevention Program Research Study.
  - Review the research design intervention methods for DPP.
  - Examine the outcomes data of the original DPP research
  - Look at subsequent extension of DPP Research
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# Comorbid Conditions of Diabetes

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Leading cause of chronic disease:

- Kidney failure
- Cardiovascular Disease
- Stroke
- Lower Limb Amputations
- Blindness
- Diabetic Nerve Damage





# DEVELOPMENT OF AN EVIDENCE BASED DIABETES PREVENTION PROGRAM

***“The Need”***



# Origins of DPP Research

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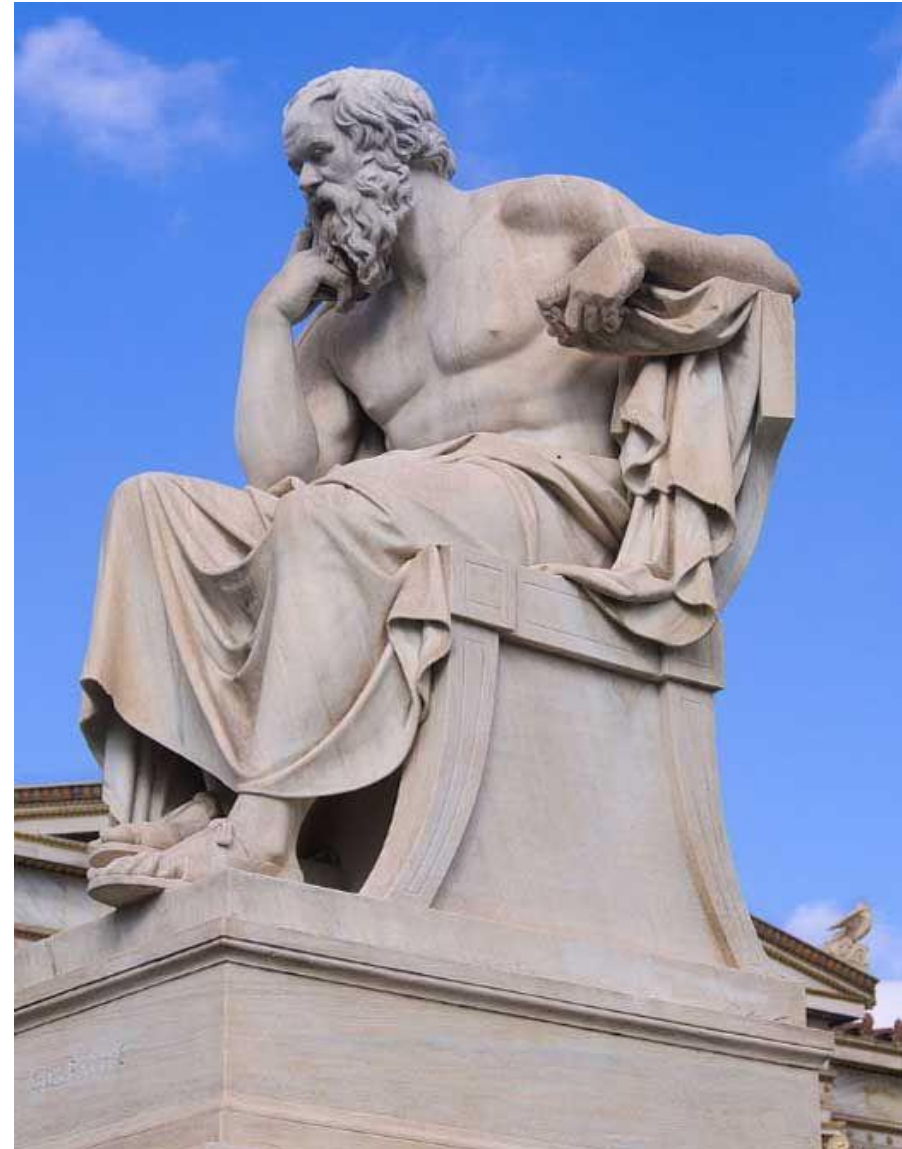




# The Thinking Began.....

- National Institute of Health
- NIDDK
- University of Pittsburgh Medical Center

Established a working Group for the development of a Diabetes Prevention Program





Diabetes  
Prevention  
Program  
Research Design

# Screening Criteria for Risk

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GESTATIONAL  
DIABETES

FAMILY HISTORY  
TYPE 2 DM

GENETIC  
PROPENSITY

>50 YRS

OBESITY

Metabolic  
Syndrome

DIAGNOSIS OF  
PRE-DIABETES



# Demographics

**3234**  
**Participants**

**Average age 51**  
**yes 20% above**  
**age 60 yrs.**

**68% women**

**42% men**

**5% Native**  
**American**

**4% Asian**

**16% Hispanic**  
**American**

**20% African -**  
**American**

# Three Randomized Research Arms



LIFESTYLE CHANGE  
GROUP




METFORMIN GROUP



PLACEBO GROUP



LIFESTYLE  
BALANCE  
INTERVENTION  
METHODS AND  
KEY FEATURES

- Goal Based Behavioral Interventions
  - Initial Core Curriculum of Education
  - Clearly Defined Weight loss & Activity Goals
  - Lifestyle “Coaches” to deliver the intervention skills
  - Frequent Contact. Intensive, Ongoing Interventions
  - Toolbox Strategies to help address obstacles for individuals
  - Intervention materials to address ethnically diverse populations
  - Extensive local and National Network to Provide Training, Feedback and Clinical Support for the Interventionists.
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## DPP Outcome Data

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**LIFESTYLE CHANGE GROUP:** A 58% rate reduction in appearance of T2DM

**METFORMIN GROUP:** A 38% rate reduction in the appearance of T2DM.

Benefitted Racial and Ethnic People who reduced risks as well.

Both men and women benefitted from lower risks.

Advanced Age > 70 yrs. old lowered their risk by a whopping 71%

# Conclusions

Lifestyle Interventions had the greatest impact on Diabetes risk reduction over metformin alone or placebo.

58% reduction in the development of Type 2 Diabetes at 3 years

DPP is cost effective justified by reduced disease burden, improved overall health, and fewer healthcare costs

DPPOS researcher are continuing to follow development of comorbid disease and costs.